FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15

DATE: 22-01-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements to Roads, drains and Covering Slab at Nanjappa Layout 11th Cross Road in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 21-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: M/s. KRIDL.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	24-12-14	21-01-15	28	22500	525	23.33	**23.33**
	002	"	"	"	"	530	23.55	
	003	"	"	"	"	520	23.11	
2	004	"	"	"	"	480	21.33	**21.70**
	005	"	"	"	"	495	22.00	
	006	"	"	"	"	490	21.77	
3	007	"	"	"	"	500	22.22	**22.29**
	008	"	"	"	"	515	22.88	
	009	"	"	"	"	490	21.77	

*As Furnished by Client.
The Results relate only to the items tested.

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	003	"	"	"	"	520	23.11	

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1. TESTING OF FINE AGGREGATES : **Date: 12-12-2014**

Sub: Testing of Fine Aggregates.
{Project*: Improvements to Roads, drains and Covering Slab at Nanjappa Layout 11th Cross Road in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-12-2014

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: M/s. KRIDL.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.00	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	87.10	60-95	75-100	85-100	
01.18	75.20	30-70	55-90	75-100	
600. mic	45.60	15-34	35-59	60-79	
300.mic	18.00	5-20	8-30	12-40	
150.mic	2.80	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.44%	Not more than 8%
2.	Specific Gravity	----	2.52	-------

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BUB/CTE/2014-15

1. TESTING OF COARSE AGGREGATES (40 mm): **Date: 12-12-2014**

Sub: Testing of Coarse Aggregates.

{Project*: Improvements to Roads, drains and Covering Slab at Nanjappa Layout 11th Cross Road in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-12-2014

Sample supplied to lab by : Assistant Executive Engineer,
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BBMP, Bangalore

Name of the Contractor/Agency*: M/s. KRIDL.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	97.00	85-100	95 – 100
20mm	65.10	0 -20	30- 70
10mm	19.00	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	16.00 %	Not to exceed 25 %
2.	Crushing value	----,,----	25.30%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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BUB/CTE/2014-15

1. TEST REPORT ON CEMENT:

Date: 16-12-2014

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to Roads, drains and Covering Slab at Nanjappa Layout 11th Cross Road in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-12-2014

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: M/s. KRIDL.

PHYSICAL TESTS ON CEMENT

Brand* : Birla
Grade * : 53
Type * : OPC
Date : 08-12-2014 to 15-12-2014

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**145 min**	Shall not be less than 30 min
2	Final setting time	**260min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.70 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.60 mm**	Shall not be more than 10 mm
5	Compressive strength k) 3 days (average of three results) l) 7 days (average of three results)	**29.00N/ Sq mm** **41.00 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

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16/12/2014
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BUB/CTE/2014-15 Date: 12-12-2014

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Improvements to Roads, drains and Covering Slab at Nanjappa Layout 11th Cross Road in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub-Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-12-2014

Sample supplied to lab by : Assistant Executive Engineer,
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Name of the Contractor/Agency*: M/s. KRIDL.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.621**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**559.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**20.60**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**628.0**	545.0

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